

Investment Attractiveness and Regional Development in Uzbekistan: The Case of Karakalpakstan

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Abstract: This article examines regional differentiation in fixed-asset investments financed through foreign direct investment and foreign loans in Uzbekistan, with particular attention to the Republic of Karakalpakstan. Using official regional statistics for 2020-2024 and 2021-2024, the study applies descriptive and comparative analysis based on growth dynamics, regional rankings, and case-focused interpretation. The findings show a substantial national increase in foreign-sourced fixed-asset investment, but also strong territorial concentration in a limited group of leading regions. Karakalpakstan recorded notable growth in per capita FDI in fixed assets and in the total volume of FDI- and loan-financed fixed-asset investment, with growth rates exceeding the national average in the later years. However, the region remained below the national average and far behind leading territories in absolute scale. The results indicate delayed and incomplete catch-up rather than full convergence. The article highlights the need to strengthen Karakalpakstan's investment infrastructure, institutional support, project preparation capacity, and local absorptive conditions.

Keywords: Foreign direct investment; fixed-asset investment; foreign loans; regional development; investment attractiveness; Karakalpakstan; Uzbekistan; regional disparities.

Introduction: Foreign direct investment and foreign loan financing are important external sources of capital for developing and transition economies, particularly when they are directed toward fixed assets. Such investment can expand productive capacity, modernize infrastructure, support technological renewal, and strengthen integration into national and international markets. However, the developmental effect of foreign-sourced capital depends not only on its total volume, but also on its territorial distribution. If investment is concentrated mainly in metropolitan, resource-rich, or institutionally stronger regions, national investment growth may coexist with persistent or even widening regional disparities. This issue is especially relevant for Uzbekistan, where economic liberalization since 2017 has increased the role of foreign investment and loans in fixed-asset formation. Official statistics indicate that in 2024 foreign investment and loans accounted for a major share of total fixed-asset investment, confirming their

growing importance for the country's development model. Within this context, the Republic of Karakalpakstan represents a particularly significant case. It is a structurally vulnerable and environmentally affected region, associated with the consequences of the Aral Sea crisis, water scarcity, land degradation, and relatively limited income opportunities. At the same time, Karakalpakstan possesses investment potential in minerals, hydrocarbons, agriculture, industry, logistics, tourism, and emerging green and digital projects. Therefore, the region provides a relevant case for examining whether foreign-sourced fixed-asset investment contributes to regional catch-up or whether investment growth remains insufficient to overcome structural lag.

Despite the growing policy importance of foreign investment in Uzbekistan, existing academic and policy literature remains largely focused on national-level reforms, the general investment climate, and aggregate FDI trends. Less attention has been paid to

regionally disaggregated evidence on fixed-asset investment financed through foreign direct investment and loans, particularly with regard to Karakalpakstan's position within Uzbekistan's territorial investment structure. This article addresses that gap by assessing the regional dynamics of foreign-sourced fixed-asset investment in Uzbekistan and by identifying the relative performance, limitations, and investment potential of Karakalpakstan. The study is guided by the following research questions: how have fixed-asset investments financed through FDI and foreign loans changed across Uzbekistan's regions; what position does Karakalpakstan occupy in the national regional investment structure; does the region demonstrate convergence, delayed growth, structural lag, or emerging investment potential; and what policy measures may strengthen its investment attractiveness? The contribution of the article is threefold: it provides regionally disaggregated evidence on foreign-sourced fixed-asset investment in Uzbekistan; it places Karakalpakstan within a comparative regional investment framework rather than treating it only as an ecological or social policy case; and it links descriptive investment dynamics with broader debates on regional disparities, peripheral development, and place-based investment policy in emerging economies. The remainder of the article reviews the relevant literature, explains the methodology and data, presents the empirical findings, and concludes with policy suggestions for improving Karakalpakstan's investment attractiveness and supporting more balanced regional development.

LITERATURE REVIEW

The literature on FDI and development has long moved beyond the simple proposition that foreign capital is automatically growth-enhancing. Seminal work established that FDI can transfer technology, managerial know-how, and productivity gains, but that these benefits are conditional on local absorptive capacity. Borensztein, De Gregorio, and Lee argued that FDI may contribute more to growth than domestic investment, but only where the host economy has sufficient human capital (Borensztein, et al., 1998). Alfaro, Chanda, Kalemli-Ozcan, and Sayek similarly found that FDI does not generate uniform outcomes across countries; rather, its contribution depends strongly on the depth of domestic financial systems (Alfaro, et al., 2004). More recent syntheses confirm that inward FDI in emerging economies is shaped by multilevel determinants and produces both macro-level and micro-level effects, which vary with institutions, governance, and policy context. The implication for regional analysis is clear: foreign capital is best understood as a conditional developmental

resource, not as a self-sufficient engine of growth.

A second strand of literature focuses more directly on the relation between FDI and capital formation. Here the evidence is mixed. Agosin and Machado showed that FDI does not mechanically crowd in domestic investment in developing countries and may have heterogeneous regional effects (Agosin, et al., 2005). Morrissey and Udomkerdmongkol found evidence that FDI can crowd out domestic private investment even while increasing total investment, and that the extent of crowding out depends on governance conditions (Morrissey, et al., 2012). For transition economies, Jude identified a "creative destruction" pattern: short-run crowding out followed by longer-run crowding in (Jude, 2019). These findings matter for the present study because the official Uzbek indicator combines foreign investment and loans directed to fixed assets. A rise in the foreign-financed share of fixed-asset investment can therefore signal stronger capital formation, but it does not, by itself, establish whether domestic investment is being complemented, displaced, or restructured. Descriptive regional analysis can identify patterns of capital deepening and territorial allocation, but not the full causal structure of investment interaction.

A third and especially relevant body of scholarship examines FDI through the lens of regional inequality. Lessmann's cross-country evidence suggests that in low- and middle-income economies, unevenly distributed FDI can raise interregional inequality, whereas these negative redistributive effects are weaker in high-income settings with better mobility, infrastructure, and public policy capacity (Lessmann, 2013). This result is important because it bridges national FDI debates with spatial political economy. Even if aggregate investment rises, peripheral regions do not necessarily benefit proportionally. If FDI is channeled disproportionately into a few metropolitan, border, or resource-rich poles, national growth may coexist with entrenched regional divergence. The policy conflict between efficiency and territorial balance is thus not theoretical; it is embedded in the geography of actual capital allocation.

This insight aligns with a broader literature on lagging regions and place-based development. Rodríguez-Pose and Ketterer show that institutional quality and, crucially, improvements in government quality are significant drivers of development in lagging regions, although low-income regions may still face binding endowment and infrastructure constraints (Rodríguez-Pose, 2020). OECD work on regional attractiveness extends this argument by conceptualizing attractiveness as a multidimensional set of territorial conditions that matter for investors, talent, and

visitors. In this perspective, investment attractiveness is not reducible to national tax incentives or macro stability. It depends on how regions perform in connectedness, infrastructure, governance, land use, environmental quality, resident well-being, and economic opportunity. Recent OECD policy work further stresses that regions can attract green and strategic FDI only when multilevel governance systems are able to align investment promotion with local capacities, infrastructure, and long-term development objectives (OECD, 2025). This conceptualization is highly relevant for Karakalpakstan, where environmental stress, distance, and infrastructure gaps interact with development policy.

METHODOLOGY

This study uses a quantitative descriptive and comparative regional approach to examine fixed-asset investment financed through foreign direct investment and foreign loans in Uzbekistan, with special attention to Karakalpakstan. The analysis is based on official regional statistics for 2020-2024 and 2021-2024, including data from the Statistics Agency under the President of the Republic of Uzbekistan and the National Statistics Committee. Three indicators are examined: per capita FDI in fixed assets, total fixed-asset investment financed through FDI and foreign loans, and annual growth rates of such investment. These indicators capture investment intensity, absolute scale, and growth dynamics across regions. Since official statistics often combine foreign direct

investment and foreign loans into one financing category, the study treats the data as foreign-sourced fixed-asset financing rather than as a narrow measure of FDI. The analysis applies descriptive statistics, regional comparison, ranking interpretation, and Karakalpakstan-focused case analysis to assess whether the region shows convergence, delayed catch-up, or persistent investment lag. The study is limited by the use of aggregate regional data and the absence of detailed project-level, firm-level, and sectoral information; therefore, the findings identify patterns and policy implications but do not establish causal relationships.

RESULTS

The following analysis evaluates the regional distribution and dynamics of foreign-sourced fixed-asset investment in Uzbekistan through three complementary lenses: investment intensity per capita, absolute investment volumes, and annual growth rates. This structure makes it possible to distinguish between regions that merely record temporary increases and those that demonstrate a stronger positional shift within the national investment hierarchy. It also allows the case of Karakalpakstan to be interpreted more precisely: not only in terms of whether its indicators increased, but whether that increase materially altered its standing relative to the country as a whole and to the principal regional leaders.

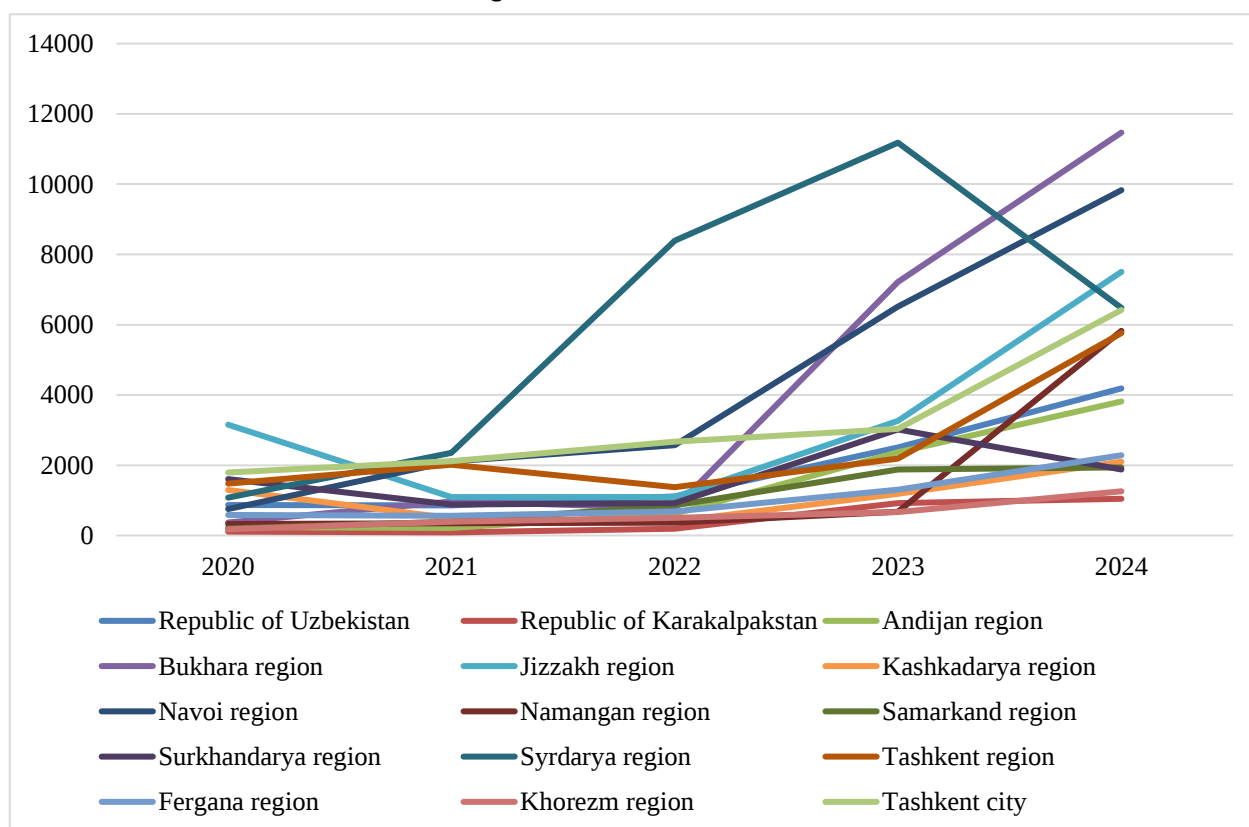


Figure 1. Regional Dynamics of Foreign Direct Investment in Fixed Assets per Capita in Uzbekistan, 2020-2024, thousand UZS (Statistics, 2026)

Figure 1 illustrates the regional dynamics of foreign direct investment in fixed assets per capita in Uzbekistan during 2020-2024. At the national level, the indicator increased from 867.1 thousand UZS per capita in 2020 to 4,186.0 thousand UZS in 2024, indicating a substantial expansion of investment activity. However, the regional distribution was highly uneven, with clear evidence of territorial concentration and persistent disparities.

The Republic of Karakalpakstan represents a particularly important case. Its indicator increased from 106.6 thousand UZS per capita in 2020 to 1,044.7 thousand UZS in 2024, which corresponds to an almost 9.8-fold increase. The main turning point occurred in 2023, when the value rose sharply from 195.2 to 922.2878 thousand UZS per capita. Nevertheless, the

subsequent increase in 2024 was limited, suggesting that the region's growth was uneven rather than sustained.

Despite significant relative growth, Karakalpakstan remained in the weakest position among all listed territorial units in 2024. Its value was far below Bukhara (11,468.0), Navoi (9,828.9), Jizzakh (7,503.1), Syrdarya (6,480.2), and Tashkent city (6,417.3 thousand UZS per capita). Thus, the figure indicates growth without sufficient convergence. For regional development policy, this implies that Uzbekistan's investment strategy should address not only aggregate FDI growth but also the territorial imbalance that limits the investment capacity of structurally lagging regions such as Karakalpakstan.

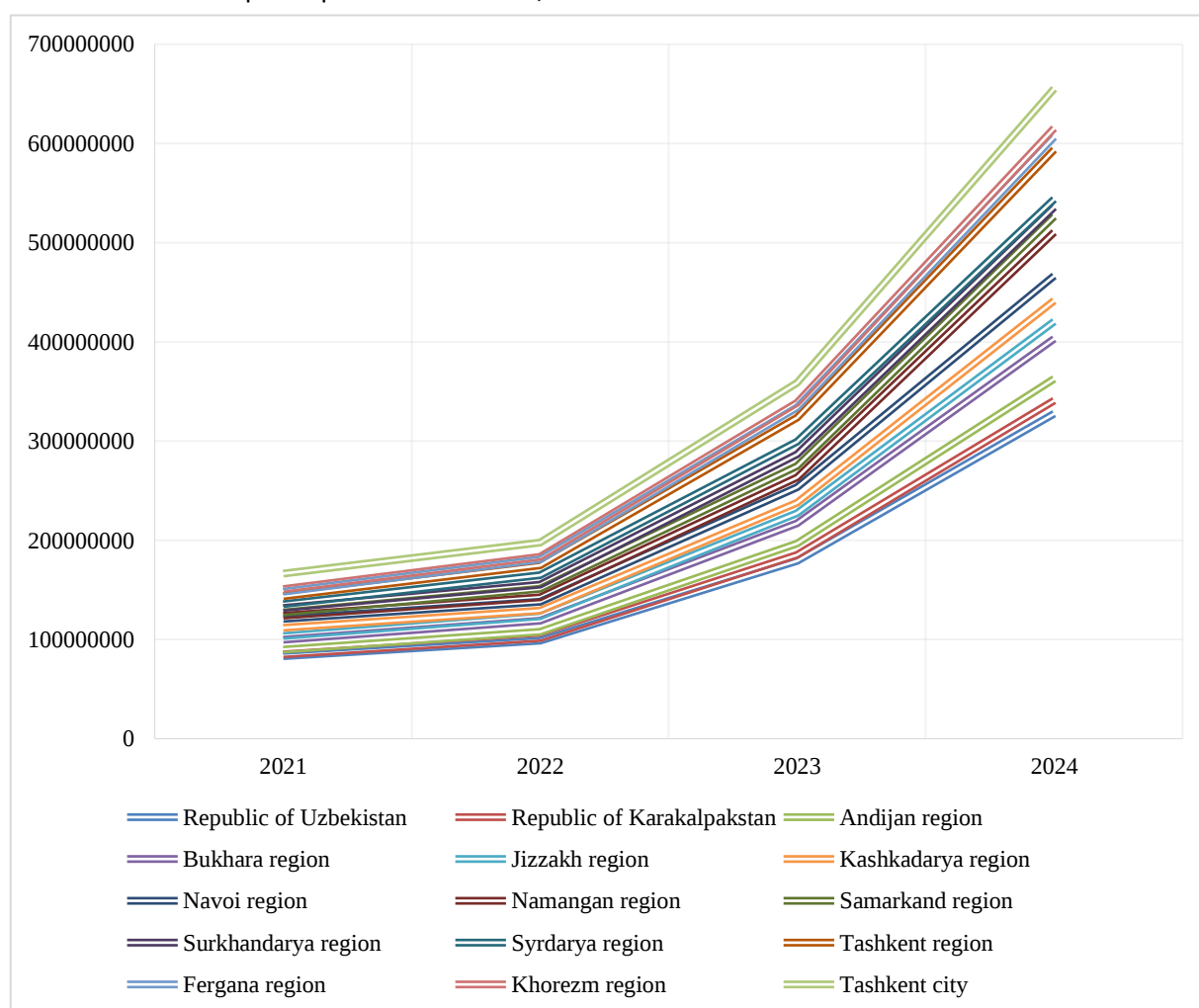


Figure 2. Regional Dynamics of Investments in Fixed Assets Financed through Foreign Direct Investment and Loans in Uzbekistan, 2021-2024, million UZS (Statistics, 2026)

Figure 2 illustrates the regional dynamics of investments in fixed assets financed through foreign direct investment and loans in Uzbekistan during 2021-2024. At the national level, the indicator increased from 83,242,452.7 million UZS in 2021 to 327,637,656.5

million UZS in 2024, reflecting approximately 3.94-fold growth. The acceleration was particularly strong after 2022, indicating a rapid expansion of externally financed fixed capital formation.

The Republic of Karakalpakstan demonstrates a

significant improvement over the same period. Its investment volume increased from 1,820,760.0 million UZS in 2021 to 13,222,632.7 million UZS in 2024, corresponding to approximately 7.26-fold growth. As a result, its share in the national total rose from about 2.19% to 4.04%. This suggests that Karakalpakstan strengthened its relative position in Uzbekistan's regional investment structure.

Nevertheless, the region remained considerably behind

the leading territories. In 2024, Tashkent region recorded 50,021,238.7 million UZS, Namangan 43,973,135.4 million UZS, Bukhara 40,365,593.9 million UZS, and Tashkent city 39,814,251.1 million UZS, all substantially exceeding Karakalpakstan's level. Thus, the figure points to catch-up growth without full convergence. Karakalpakstan's investment performance improved markedly, but the scale of external financing remained insufficient to place it among Uzbekistan's major investment centers.

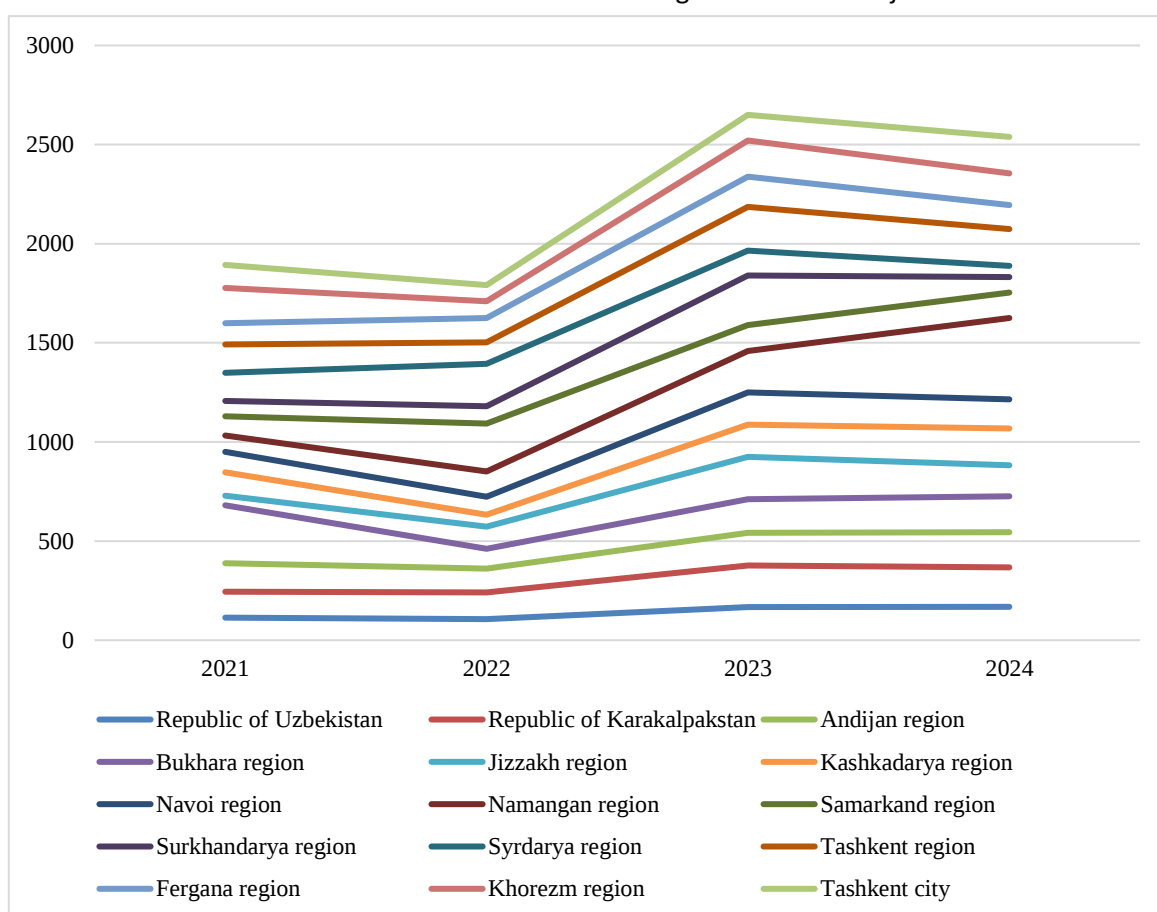


Figure 3. Regional Growth Rates of Investments in Fixed Assets Financed through Foreign Direct Investment and Loans in Uzbekistan, 2021-2024, % (Statistics, 2026)

Figure 3 illustrates the annual growth rates of investments in fixed assets financed through foreign direct investment and loans across Uzbekistan during 2021-2024. At the national level, the indicator declined slightly from 113.1% in 2021 to 106.2% in 2022, before increasing sharply to 167.8% in 2023 and 168.2% in 2024. This pattern indicates a clear acceleration of externally financed fixed-capital investment after 2022. The Republic of Karakalpakstan demonstrates a particularly strong trajectory. Its growth rate increased from 131.0% in 2021 to 134.7% in 2022, then reached 209.0% in 2023 and remained high at 199.7% in 2024. Karakalpakstan exceeded the national growth rate in every year, with the largest gap observed in 2023, when its rate was 41.2 percentage points higher than the national level.

Compared with other regions, Karakalpakstan moved into a stronger relative position over time. By 2024, it recorded the second-highest growth rate among the listed regions, behind only Namangan (409.9%). This suggests that Karakalpakstan experienced substantial investment growth momentum. Nevertheless, because the figure presents growth rates rather than absolute volumes, the results should not be interpreted as evidence that Karakalpakstan has become one of the largest investment-receiving regions. Rather, the figure indicates improving dynamics and potential strengthening of regional investment attractiveness.

Accordingly, the subsequent detailed analysis should be read as an assessment of both progress and distance. The figures suggest that Karakalpakstan has become more active in attracting foreign-sourced

investment into fixed assets and that the region's recent trajectory is stronger than its earlier position would suggest. However, they also show that the gap separating Karakalpakstan from Uzbekistan's main investment centers-especially Bukhara, Navoi, and Tashkent city-remains substantial. The core analytical task is therefore to explain this duality: accelerating growth on the one hand, and persistent structural peripherality on the other.

CONCLUSION

This study examined the regional distribution of fixed-asset investment financed through foreign direct investment and foreign loans in Uzbekistan, with particular attention to Karakalpakstan. The findings show that Uzbekistan experienced a substantial increase in foreign-sourced fixed-asset investment during the observed period, but this growth was territorially uneven. While the national trend indicates an intensification of external financing, the regional structure reveals a clear hierarchy in which leading territories such as Bukhara, Navoi, Jizzakh, and Tashkent city retained stronger investment positions. This pattern confirms that foreign-sourced investment does not automatically produce balanced regional development; instead, it tends to concentrate in regions with stronger production bases, infrastructure, resource endowments, institutional capacity, and urban-economic advantages. Therefore, the regional allocation of foreign investment and loans should be treated as a central issue of development policy rather than as a secondary outcome of national investment growth.

Karakalpakstan's investment trajectory is best characterized as delayed and incomplete convergence. The region demonstrated meaningful improvement, including a sharp increase in per capita FDI in fixed assets, strong growth in the absolute volume of fixed-asset investment financed through FDI and loans, and growth rates that exceeded the national average in the later years of the observed period. These dynamics suggest that Karakalpakstan has begun to strengthen its visibility within Uzbekistan's regional investment landscape. However, the region still remained among the weakest territories in per capita terms and continued to lag far behind the leading regions in absolute investment scale. Thus, rapid relative growth should not be interpreted as full catch-up. The evidence indicates emerging investment potential from a low initial base, but not yet a structural transformation of Karakalpakstan's position within the national hierarchy. The broader implication is that improving the region's investment attractiveness requires a differentiated policy approach focused on infrastructure, institutional facilitation, investment-

ready projects, local absorptive capacity, and stronger integration of foreign-sourced investment with employment, productivity, and sustainable regional development.

Several policy implications follow from the empirical findings.

First, Karakalpakstan should strengthen its regional investment infrastructure. Priority should be given to transport and logistics connectivity, reliable energy supply, water and communal infrastructure, serviced industrial land, and digitally enabled investor-support systems. Infrastructure in Karakalpakstan should be viewed not only as a social development requirement, but also as a key factor influencing investor location decisions, project implementation costs, and the region's overall investment attractiveness.

Second, regional institutions should improve investor facilitation and project preparation capacity. Karakalpakstan needs more effective one-stop services, transparent land and permit procedures, predictable administrative rules, and stronger aftercare for existing investors. At the same time, the region should develop a pipeline of investment-ready projects with feasibility studies, prepared industrial sites, environmental clearances, and credible partnership mechanisms. This is especially important in sectors where Karakalpakstan has potential advantages, including agro-processing, construction materials, logistics, renewable energy, climate-resilient agriculture, tourism, and selected digital activities.

Third, investment policy should be linked to local absorptive capacity and sustainable regional development. Attracting foreign investment and loans is not sufficient if local firms, workers, and institutions cannot effectively absorb their benefits. Therefore, policy should support vocational and technical training, local supplier development, enterprise upgrading, and stronger links between foreign-financed projects and regional employment. Given the ecological vulnerability of the Aral Sea region, investment policy should also incorporate water-saving technologies, green industrial standards, climate-adapted agriculture, and environmental resilience. This would allow Karakalpakstan to transform foreign-sourced fixed-asset investment into broader, more sustainable regional development.

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